REMARKS

Claims 13-22, 24-60, and 63-68 are pending in the application.

Claims 12, 23, 61, 62 are cancelled without prejudice or disclaimer.

Claims 13, 14, 16, 18, and 19 are amended to depend from amended claim 22.

Claims 22, 24, 28, 37, 43 and 58, are amended to add the feature that the light diffracting means serves also for simultaneously regulating the intensity of the ex-citation light.

Claims 24 and 43, which are directed to microscopes with a plurality of light sources, are amended to further add that the light diffracting means serves also for independently regulating the intensity of the different wavelengths.

Claims 24 and 43 are amended to specify more precisely that there is a plurality of light sources and that the excitation light of each of the light sources is coupled into the beam path by means of one of the light diffracting or acousto-optical means, respectively.

Claims 43 and 58 are amended so that the arrangement of the plurality of acousto-optical means on a common optical axis is specified more closely.

These changes are believed not to introduce new matter, and entry of the Amendment is respectfully requested.

Based on the above Amendment and the following Remarks, Applicant respectfully requests that the Examiner reconsider all outstanding rejections, and withdraw them.

Rejections under 35 U.S.C. § 102

In paragraph 7 of the Office Action, claims 12-20, 22-25, 27-32, 37-39, 51, 53-55, 57, 63-68 were rejected under section 102(a) as being anticipated by Engelhardt et al. (WO99/42884). This rejection is overcome by the cancellation of claims 12 and 23 and the amendment of claims 22, 24, 28, and 37.

Before discussing the merits of the rejection, it is noted that claim 68 was rejected under section 102(a) as being anticipated by Engelhardt et al. (WO 99/42884), while independent claim 43, from which it depends, was rejected under section 103(a) as being unpatentable over Engelhardt '844. The rejection of claim 68 therefore will be discussed with the rejection of claim 43, from which it depends.

Turning now to the rejection itself, Engelhardt '884 is concerned with an optical arrangement with a spectrally selective element. In Engelhardt '884, radiation of a light source or a plurality of light sources is coupled into a beam path of a microscope by means of an acousto-optical element.

It is further described in Engelhardt '884 that the power, *i.e.* the intensity of different wavelengths, can be selectively regulated by additional AOTF's after merging of the beams (Engelhardt '884, page 6, lines 17-19).

However, in the microscope according to the invention as recited in claims 22, 24, 28, and 37, the excitation light is both coupled into the beam path by diffraction and simultaneously regulated in its intensity. In this way, a very compact arrangement of the optical components can be achieved. This key idea of simultaneously coupling in and intensity-regulating the excitation light

with the same acousto-optical element is not disclosed in Engelhardt '884, let alone the other references of record.

The subject matter of claim 24 differs still further from Engelhardt '884 in that as recited in claim 24, the arrangement comprises a plurality of light sources, the radiation of which is coupled into the beam path by a separate light diffracting means or an acousto-optical element, respectively. In each case, the intensity of the respective wavelength is simultaneously regulated by the light diffracting means or the acousto-optical means, respectively. Thereby, a highly precise adjustment of the excitation radiation is possible.

In fundamental contrast thereto, with Engelhardt '884, the radiation of a plurality of lasers is coupled into the beam path with one single AOD. The respective intensities, however, are regulated by additional AOTFs which are arranged downstream of the AOD.

In view of the foregoing, it is respectfully submitted that the invention as recited in independent claims 22, 24, 28, and 37, and the claims depending therefrom, is not taught by Engelhardt '884; and that the rejection should be withdrawn.

Rejections under 35 U.S.C. § 103

1. Claims 21, 33-36, and 40

In paragraph 9 of the Office Action, claims 21, 33-36, and 40 were rejected under section 103(a) as being unpatentable over Engelhardt et al. This rejection is believed to be overcome by the amendments to claims 22, 28, and 37, from which claims 21, 33-36, and 40 depend, for the reasons discussed above with respect to the rejection of claims 22, 28, and 37.

2. Claims 26, 41-45, and 49

In paragraph 10 of the Office Action, claims 26, 41-45, and 49 were rejected under section 103(a) as being unpatentable over Engelhardt et al. This rejection is believed to be overcome by the amendments to claims 24, 28, and 37, from which claims 26, 41, and 42 depend, for the reasons discussed above with respect to the rejection of claims 24, 28, and 37. The rejection with respect to claim 43, and claims 44, 45, and 49 depending therefrom, is believed to be overcome by the amendments to claim 43.

The subject matter of claim 43 differs from Engelhardt '884 for the reasons stated above with respect to claim 24, in that as recited in claim 43, the arrangement comprises a plurality of light sources, the radiation of which is coupled into the beam path by a separate light diffracting means or an acousto-optical element, respectively. The intensity of the respective wavelength is simultaneously regulated by the light diffracting means or the acousto-optical means, respectively.

In contrast, with Engelhardt '884, the radiation of a plurality of lasers is coupled into the beam path with one single AOD. The respective intensities, however, are regulated by additional AOTFs which are arranged downstream of the AOD.

In view of the foregoing, it is respectfully submitted that the invention as recited in independent claims 26, 41-45, and 49 is not taught or suggested by Engelhardt '884; and that the rejection should be withdrawn.

3. Claims 46-48

In paragraph 11 of the Office Action, claims 46-48 were rejected under section 103(a) as being unpatentable over Engelhardt et al. The rejection of claims 46-48 is believed to be overcome

for the reasons stated above with respect to the rejections of claims 26, 37, and 43, from which they respectively depend.

4. Claims 50, 52, 56, and 58-62

In paragraphs 12 and 13 of the Office Action, claims 50, 52, 56, and 58-62 were rejected under section 103(a) as being unpatentable over Engelhardt et al. in view of Asakawa (JP 01282515). This rejection is believed to be overcome by the amendments to claim 28, from which claims 50 and 52 depend, for the reasons stated above with respect to the rejection of claim 28, and by the amendments to claim 58.

The subject matter of claim 58 differs from Engelhardt '884 for the same reasons as stated previously with respect to claims 24 and 53, in that as recited in claim 58, the arrangement comprises a plurality of light sources, the radiation of which is coupled into the beam path by a separate light diffracting means or an acousto-optical element, respectively. The intensity of the respective wavelength is simultaneously regulated by the light diffracting means or the acousto-optical means, respectively.

In contrast, with Engelhardt '884, the radiation of a plurality of lasers is coupled into the beam path with one single AOD. The respective intensities, however, are regulated by additional AOTFs which are arranged downstream of the AOD.

The teaching of Asakawa which was cited in the Office Action is not considered to be relevant in this context. Asakawa uses a separate AOM for each light source. The AOMs serve only for regulating the intensity of the respective wavelength and have nothing to do with the feeding-in of the radiation into the microscopic beam path. Therefore, even if the teachings of Engelhardt '844

were modified in accordance with the teachings of Asakawa, as suggested in the Office Action, the invention as recited in claim 58 would not result.

Claims 43 and 58 further recite the arrangement of the plurality of acousto-optical elements, which simultaneously serve for coupling the radiation into the beam path and for regulating the respective intensity, in a certain way on the common optical axis. It is specified to arrange the acousto-optical means such that in the direction of the microscope optics are firstly provided an AOM and then an AOTF.

Such an arrangement, which is not disclosed in any of the cited references, has in particular advantage when the different light sources are arranged in such a way that the radiation is successively fed into the beam path in sequence base on decreasing wavelength. Such an arrangement is the subject matter of claim 56, which is discussed below.

In view of the foregoing, it is respectfully submitted that the invention as recited in claims claims 50, 52, 56, and 58-62 is not taught or suggested by Engelhardt '884 and Asakawa, alone or in combination; and that the rejection should be withdrawn.

Conclusion

All rejections have been complied with, properly traversed, or rendered moot. Thus, it now appears that the application is in condition for allowance. Should any questions arise, the Examiner is invited to call the undersigned representative so that this case may receive an early Notice of Allowance.

Favorable consideration and allowance are earnestly solicited.

Respectfully submitted,

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